



Federal Retirement Thrift Investment Board Thrift Savings Plan

March 28, 2023

BlackRock Overview

Who we serve is at the center

We support millions of people around the world by working alongside plan sponsors, advisors, consultants, insurers, and recordkeepers to build more resilient retirement plans

72,000+

defined contribution plans in the U.S. and Canada entrust us with their participants' retirement futures¹

60%

of the Fortune 100 companies trust our products and services to help their participants' save¹

~40mn

American and Canadian workers invest in our products through their defined contribution plans²

~100

dedicated retirement professionals who serve as consultative partners to clients as well as thought leaders on industry trends

A global perspective:

- **53%** of our global client assets are related to retirement¹
- **8** countries where our flagship LifePath target date strategies are available¹

BlackRock's Purpose



We help more and more people experience financial well-being

¹ BlackRock, data as of 31 December 2021. ² Strategic Insight, Pensions and Investments (FERs), December 2020. Retirement savers in the US and Canada that have access to BlackRock products in their defined contribution plans.

We are designed to deliver: our investment platform seeks to enhance outcomes, returns, convenience, value and transparency for clients.

Investment solutions designed to meet every client need

**Active
Equities**

\$393bn

**Active Fixed
Income**

\$1,053bn

**Cash
Management**

\$671bn

Multi-Asset

\$685bn

Alternatives

\$318bn

**iShares® &
Index**

\$5,606bn

Investment teams directly benefit from firm-wide resources

**BlackRock
Capital Markets**

**Aladdin®, Data &
Technology**

**BlackRock
Investment Institute**

**Global Capital
Markets**

**Securities
Lending**

**BlackRock Investment
Stewardship**

Public Policy

Transition Management

**Sustainable & Transition
Solutions**

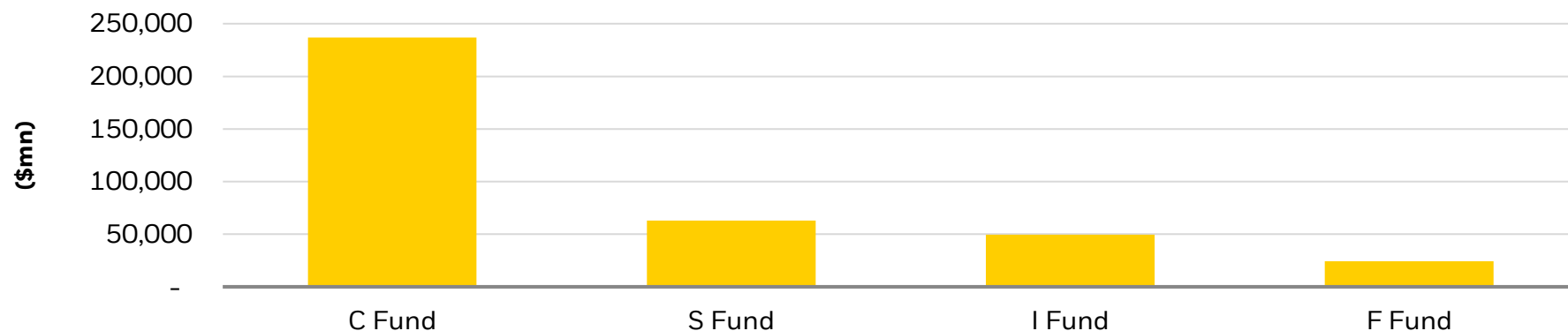
**Risk &
Quantitative Analysis**

Source: BlackRock. Assets under management as of December 31, 2022. All figures are represented in USD. Alternatives AUM may include committed capital, in addition to invested capital, which remains subject to drawdown.

C, S, I, and F Funds Summary

Thrift Savings Plan – assets under management

Participants' AUM (\$) as of December 31, 2022



Funds	Benchmark	AUM (\$) as of December 31, 2022
C Fund	S&P 500® Index	236,948,696,317
S Fund	Dow Jones U.S. Completion Total Stock Market Index	63,040,452,063
I Fund	MSCI EAFE Index	49,416,986,382
F Fund	Bloomberg Barclays U.S. Aggregate Bond Index	24,196,585,521
Total		\$373,602,720,283

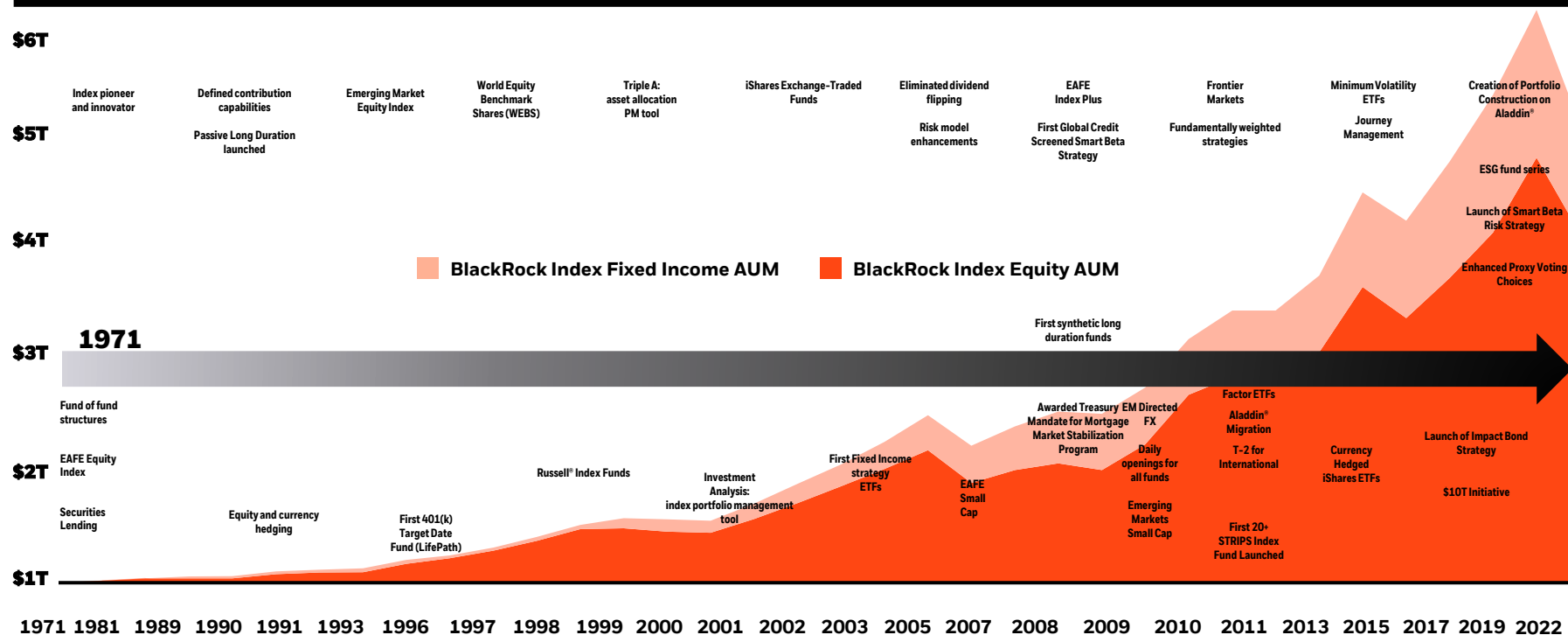
Equity Index (C, S, and I Funds)

Over 50 years of experience driving index forward

Creating solutions so our clients have access to high quality index exposures

- Drive the industry forward through our ability to create specialized, innovative investments afforded by our scale & depth of expertise
- Forge new ground for clients – a history of being first to market with new investment ideas
- Evolve capabilities to continuously deliver on emerging trends – smart beta, global benchmarking, overlay strategies
- Serve as an index advocate on behalf of asset owners and act as a key partner to index providers seeking our practitioner knowledge

Over 50 years of Index Equity – Continual evolution of products, technology and capabilities



AUM as of 31 December 2022

Focus on efficient performance outcomes

Supported by proprietary Aladdin® technology

- BlackRock's disciplined index portfolio management is focused on optimally balancing return, risk and cost in seeking to deliver effective outcomes to clients
- Our portfolio managers specialize in financial markets, supported by BlackRock's extensive global trading platform and market leading analytics, to provide a high-quality index experience



What is Aladdin® ?

- A sophisticated operating system that connects information, people and technology to support the entire investment lifecycle

Aladdin® helps solve investing challenges:

- Technology does the 'heavy-lifting', enabling portfolio managers to focus on key drivers affecting portfolio return
- Offers process scalability and efficiency
- Includes consistency across product types and functions

Source: BlackRock. Investment process is shown for illustrative purposes only and is subject to change.

Index Investment Management Cycle – dedicated expertise and resources

Performance & Oversight

- Review cumulative effect of investment decisions to help identify factors contributing to/detracting from portfolio performance
- Risk & Quantitative Analysis Team (RQA) monitors dozens of risk factors globally on a continuous basis
- **Aladdin® Platform Advantage:** Portfolio Management tools are integrated on the same platform as risk monitoring tools, making it easy for RQA to provide a third-party risk assessment on portfolios

Efficient Trading

- Global trading infrastructure allows for real time oversight of all trades in all regions
- Smart trading strategies are designed to access optimal liquidity
- Industry's largest internal marketplace for potential netting of client flows
- Focused trading research and systems
- **Aladdin® Platform Advantage:** Extensive global trading platform helps ensure low costs and optimal access to liquidity

Benchmark Knowledge

- Detailed knowledge of index methodologies
- Experience with predicting and projecting index changes
- Focused on optimal treatment of corporate actions
- Continual research into index events
- **Aladdin® Platform Advantage:** Proprietary Aladdin® 'Index Pro' application makes analyzing benchmark changes a clean and efficient process

Portfolio Construction

- Significant investment in technology
- Market leading portfolio and risk tools provided by our Aladdin® platform
- Integrated cost, risk, and liquidity analysis
- Access to sophisticated optimization tools
- **Aladdin® Platform Advantage:** Custom 'Portfolio Construction' application built by our Portfolio Management Team designed specially for index management

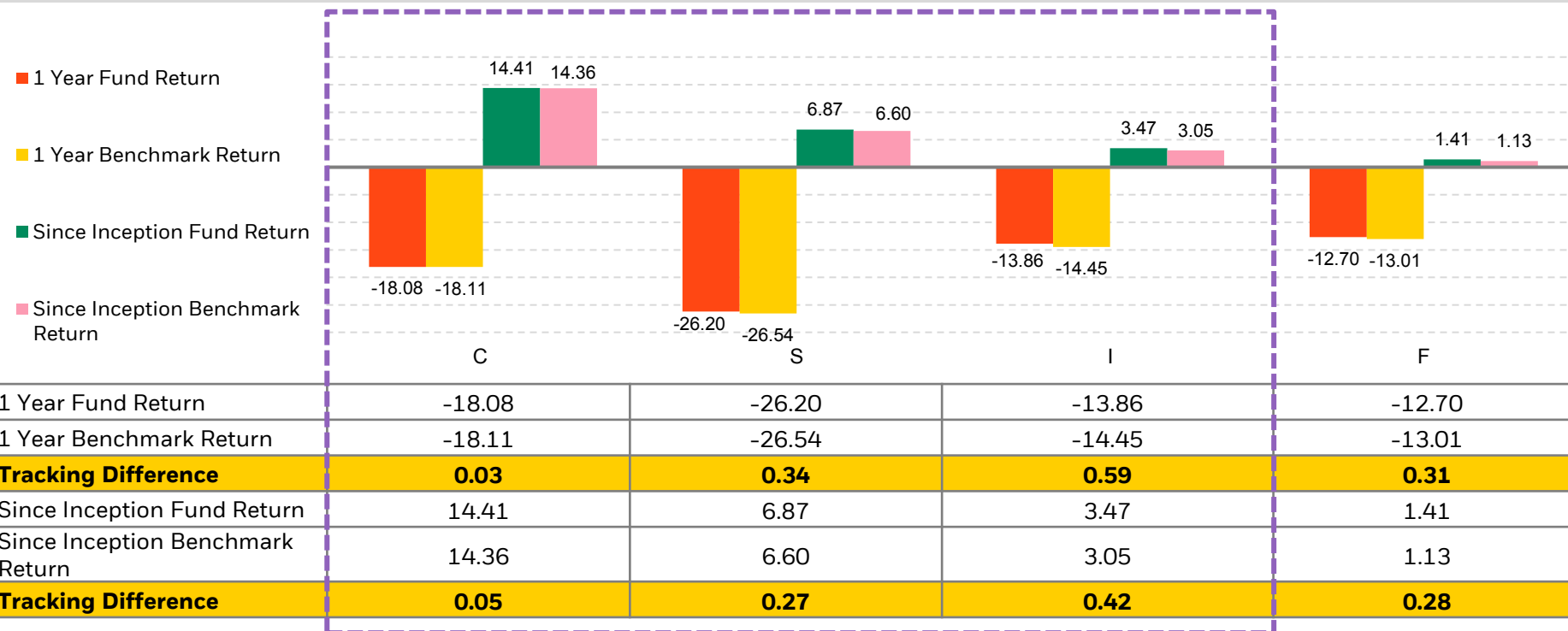


Source: BlackRock. Investment process is shown for illustrative purposes only and is subject to change.

Thrift Savings Plan – performance

Performance relative to benchmarks – as of December 31, 2022

Gross of fee returns* (%)



*Fund returns are unaudited, annualized, assume reinvestment of dividends, and are gross of investment management fees. Deduction of fees will reduce return.

A DC Fund's performance may differ from that of its benchmark for various reasons, including, but not limited to, investment strategy and/or, in the case of an index fund, equitization of cash (e.g., by investing in futures or other instruments that serve as a proxy for index exposure). A DC Fund's performance may differ from the performance of its benchmark more dramatically than a fund offered only to defined benefit plan investors due to several factors that are specific to funds sold to DC plan investors, including but not limited to Fair Value Pricing. In the event that current market valuations are not readily available or such valuations do not reflect current market values, the affected investments will be valued using fair values determined in good faith. The frequency with which the fund's investments are valued using fair values is primarily a function of the types of securities and other assets in which the fund invests pursuant to its investment objective, strategies and limitations. Fair values may differ from closing prices, which are the prices on which index performance is based. Consequently, valuing the fund's investments using fair values ("fair values") may result in a difference between the fund's performance (based on the value of the fund's investments) and the performance of the underlying index (based on closing prices). Note, some items may not sum due to rounding.

Since Inception dates: C Fund – 4/30/1988; S Fund – 5/2/2001; I Fund – 5/2/2001; F Fund – 4/30/1988

Benchmarks: C Fund (S&P 500 Index), S Fund (Dow Jones U.S. Completion Total Stock Market Index), I Fund (MSCI EAFE Index), F Fund (Bloomberg Barclays U.S. Aggregate Bond Index)

Past performance is no guarantee of future results

As of December 31, 2022; Source: BlackRock

Thrift Savings Plan – 1 Year performance attribution

	C Fund	S Fund	I Fund *	I Fund – <i>excluding FVP</i>	F Fund
1 Year Fund Return	-18.08	-26.20	-13.86	-14.07	-12.70
1 Year Benchmark Return	-18.11	-26.54	-14.45	-14.45	-13.01
Tracking Difference	0.03	0.34	0.59	0.38	0.31
Attribution Summary	Securities Lending	Securities Lending Security Sampling Futures / Cash	Fair Value Pricing Tax Advantage Securities Lending	Tax Advantage Securities Lending	Securities Lending Security Sampling

* Return includes the impact of Fair Value Pricing

Gross of fee returns (%) as of December 31, 2022

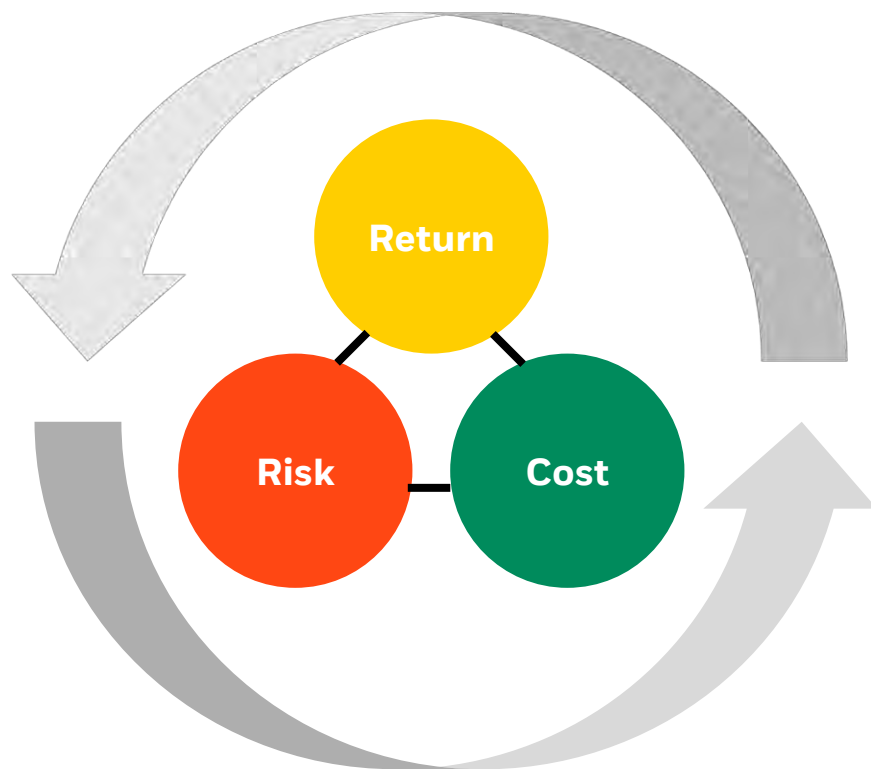
Fixed Income Index (F Fund)

Philosophy

Total performance management

Superior investment outcomes may be best achieved through a disciplined, objective process for managing return, risk and cost

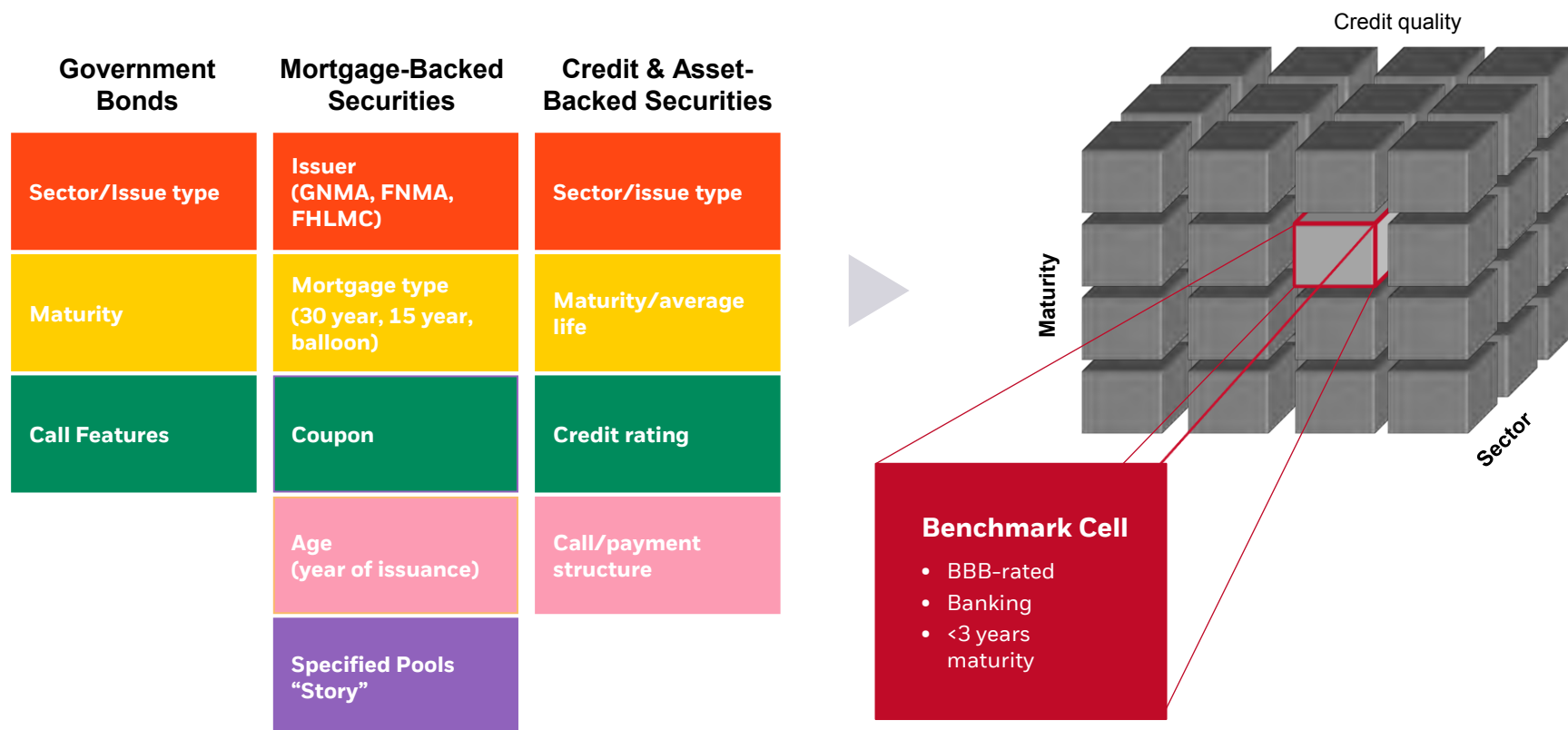
- **Return** — Performance as planned with value-added portfolio management
- **Risk** — Proprietary portfolio & risk management system helps manage investment and operational risk
- **Cost** — Trading cost integrated into portfolio construction using proprietary transaction cost models



Source: BlackRock. Investment process is shown for illustrative purposes only and is subject to change.

Portfolio construction

Stratified sampling: Dividing the various indexes into subsets (cells) based upon relative parameters



Portfolios are constructed by sampling bonds from each index cell

Source: BlackRock. For illustrative purpose only and subject to change.

Thrift Savings Plan – performance

Performance relative to benchmarks – as of December 31, 2022

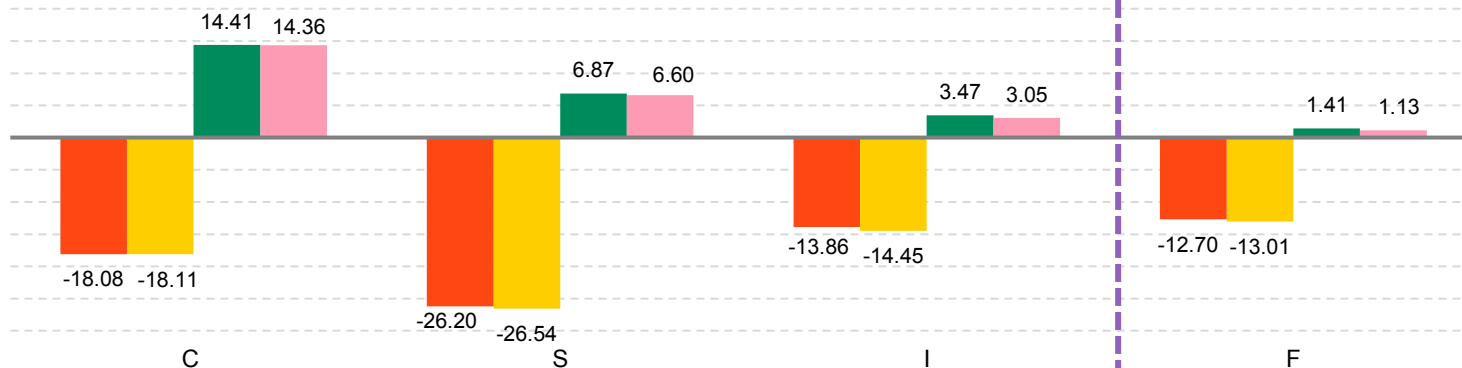
Gross of fee returns* (%)

■ 1 Year Fund Return

■ 1 Year Benchmark Return

■ Since Inception Fund Return

■ Since Inception Benchmark Return



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Since Inception Fund Return	14.41	6.87	3.47	1.41
Since Inception Benchmark Return	14.36	6.60	3.05	1.13
Tracking Difference	0.05	0.27	0.42	0.28

*Fund returns are unaudited, annualized, assume reinvestment of dividends, and are gross of investment management fees. Deduction of fees will reduce return.

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As of December 31, 2022; Source: BlackRock

Thrift Savings Plan – 1 Year performance attribution

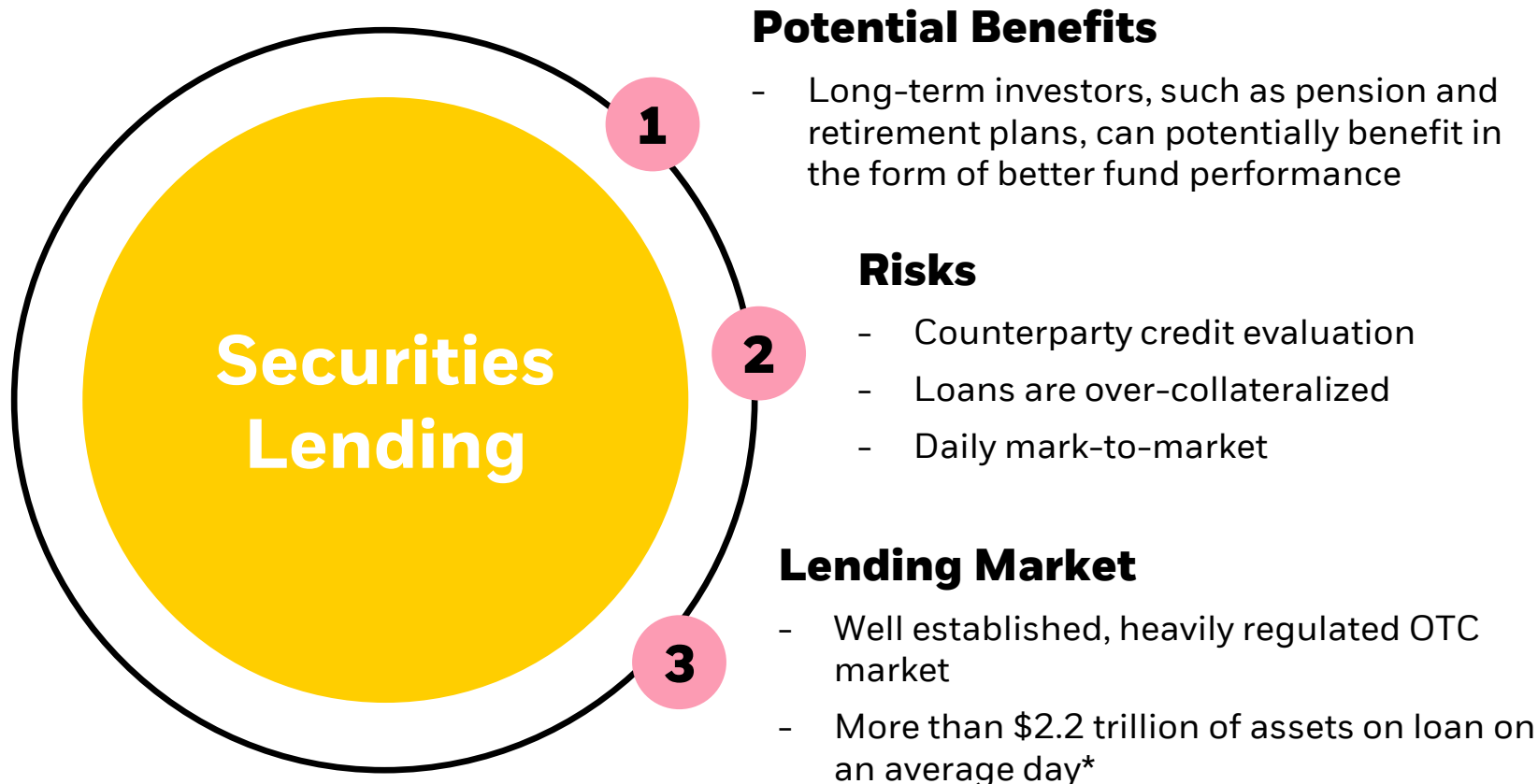
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Gross of fee returns (%) as of December 31, 2022

Securities Lending Review

What is Securities Lending?

Securities Lending is a well-established practice whereby an asset owner makes short-term loans of stocks or bonds to unlock additional value from a portfolio



*Source: S&P Global Securities Finance (formerly Markit) as of 12/31/2022
Past performance is no guarantee of future results.

What's new in BlackRock's securities lending program



Trading Research

Partner with Data Science, AI and Alpha Generation research and technology teams

- Continue to evolve proprietary research models; develop systematic signal delivery for real time trading insights
- Use AI and advanced analytics in electronic and high-touch trading decisions (pricing, allocation, predictive models)



Platform & Technology

New Trading Functionality

- IT development to increase e-trading volumes

Trading & Operations Systems Re-architecture

- Scale pre & post trade functions

Operational Efficiency

- Expanded Aladdin and SL database integration
- New data visualization tools



Market Structure & Regulatory

Collateral Flexibility

- Potential for equities as collateral in the US

Exchange Act Rule 10c-1

- SEC proposal to increase transparency in the securities lending market

Central Securities Depositories Regulation (CSDR)

- Objective to improve securities settlement efficiency on CSDs in the EU Economic Area
- Went live in February 2022

Updates to Form NP-X

- Enhancement to companies' reporting of their proxy votes

T+1 Settlement

- Transition from a T+2 to a T+1 settlement period in 2024

For illustrative purposes only. Subject to change.
Source: BlackRock, as of 31 December 2022

2022 Securities Lending Fund Performance for Federal Retirement Thrift Investment Board

C Fund

- Borrowing demand was most significant in the Information Technology (Data Processing & Technology Hardware), Consumer Discretionary (Hotels & Resorts) and Industrials (Industrial Machinery & Airlines) sectors, making up a majority of the fund's income.
- The fund experienced the highest lending yield in several years as a result of both increased U.S. equity market volatility which led to broad borrowing demand, and a beneficial cash reinvestment environment during the first three quarters of the year.

S Fund

- Demand was driven by a mix of electric vehicle, health care names, retail oriented stocks and other directional shorts. Electric vehicle related companies, including battery and autonomous driving focused firms, were the most in demand in the period. Retail oriented stock names saw a resurgence in demand during this period due to sustained concerns around the companies' fundamentals.
- Consistent with previous years, the S Fund was the largest source of securities lending income.

I Fund

- Demand was driven primarily by corporate action activity and directional shorts throughout the year. France was the largest income generating market in the I fund, making up over half of the fund's income.
- Australian securities in the Materials (Diversified Materials & Mining) sector were also a strong source of revenue during the year.

F Fund

- U.S. Treasuries generate most of the lending income for the F Fund. There continued to be opportunity to generate income due to the attractive cash reinvestment that presented itself for most of 2022, coupled with strong demand from borrowers for U.S. Treasuries.
- While demand for investment grade credit is significantly less than treasuries, we did see increased demand in 2022 driven by higher interest rates and inflation.

Source: BlackRock data, as of 12/31/2022

The above is a summary of the Securities Lending Fund performance for Federal Retirement Thrift Investment Board from January to December 2022. Past performance does not guarantee future results.

Appendix

Important notes

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Securities Lending Returns

BlackRock retains a portion of securities lending returns in exchange for managing the program. This fee reflects risk management, as well as the technology and personnel costs of maintaining the lending platform. In addition, BlackRock receives a fee for the management of cash collateral. Actual lending yields and fees for strategies represented may vary. Please note, other administrative costs, including but not limited to, accounting, custody and audit fees, may vary. Investors may receive 50% of securities lending returns and BlackRock retains 50%, except in cases where a client may negotiate a different compensation arrangement. BlackRock may negotiate different securities lending compensation arrangements with our clients depending on a variety of factors, including, but not limited to, the nature and size of the investment and the overall relationship with, and services delivered to, a particular client. Asset spread income is defined as the interest income earned in cash reinvestment funds on collateral balances less the Federal Funds Open Rate. Liability spread income is defined as the difference between the Federal Funds Open Rate and the rebate rate negotiated with the borrower.

Forward Looking Information

This material may contain “forward-looking” information that is not purely historical in nature. Such information may include, among other things, projections, forecasts, estimates of yields or returns, and proposed or expected portfolio composition. Moreover, where certain historical performance information of other investment vehicles or composite accounts managed by BlackRock, Inc. and/or its subsidiaries (together, “BlackRock”) has been included in this material and such performance information is presented by way of example only. No representation is made that the performance presented will be achieved, or that every assumption made in achieving, calculating or presenting either the forward-looking information or the historical performance information herein has been considered or stated in preparing this material. Any changes to assumptions that may have been made in preparing this material could have a material impact on the investment returns that are presented herein byway of example.

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Important notes (cont.)

Money Market Fund

Although a money market fund seeks to preserve the value of one's investment at \$1.00 per share, it is possible to lose money by investing in a money market fund. Investment in a money market fund is not similar to making a bank deposit. This investment is not insured or guaranteed by the Federal Deposit Insurance Corporation or by any bank or governmental agency.

Risk

Securities lending involves exposure to certain risks, including cash collateral investment risk (i.e., risk that cash collateral investments, whether in Cash Collateral Funds or otherwise, may not achieve their investment objective, including suffering realized or unrealized loss due to investment performance), "gap" risk (i.e., risk that the return on cash collateral investments is insufficient to pay the rebate fees the Lending Fund or Lending Account has committed to pay to borrowers), liquidity risk (i.e., risk that the cash collateral is invested, directly or through the Cash Collateral Funds, in securities and other instruments that are less liquid than the Lending Fund or Lending Account, which could limit the liquidity available to the Lending Fund or Lending Account for ordinary course transactions), operational risk (i.e., risk of losses resulting from problems in the settlement and accounting process), foreign exchange risk (i.e., risk of a shortfall at default when a cash collateral investment is denominated in a currency other than the currency of the assets being loaned due to movements in foreign exchange rates), and credit, legal, counterparty and market risks. At any particular point in time, investments in the Cash Collateral Funds could comprise a material portion of a Lending Fund's assets.

Investing involves risk, including possible loss of principal. Asset allocation and diversification strategies do not assure a profit and may not protect against loss or effects of market or other economic conditions on asset classes. Diversification among investment options and asset classes may help to reduce overall volatility.

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